



#15, 218

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of Ryan N. RAKVIC et al.

Group Art Unit: 2188

Application No.: 09/891,523

Examiner: Midys INOA

Filed: June 27, 2001

Docket No.: 02207/1123601

For: Parallel Cachelets

RECEIVED

APR 02 2004

Technology Center 2100

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR § 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom. The filing of this Information Disclosure Statement and the enclosed PTO Form No. 1449, shall not be construed as an admission that the information cited is prior art, or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b). The paragraphs marked below are applicable. It is believed that no fees other than those indicated below are due, but authorization is hereby given to charge any additional fees due, or to credit any overpayment, to deposit account 11-0600.

☐ 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a final action, Notice of Allowance, or any action that otherwise closes prosecution.

04/01/2004 EAREGAY1 00000047 110600 09891523


01 FC:1606 180.00 DA

■ c. Please debit Deposit Account No. 11-0600 in the amount of \$180.00 in payment of the fee under 37 CFR §1.17(p) to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached. 37 CFR §1.97(c)(2).

Respectfully submitted,

KENYON & KENYON

Date: 3/31/04


Robert L. Hails, Jr.
Registration No. 39,702

Kenyon & Kenyon & Kenyon
1500 K Street, N.W.
Washington, D.C. 20005
Telephone: (202) 220-4200
Facsimile: (202) 220-4201

Substitute for form 1449A/PTC

MAR 31 2004

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet	1	of	2
-------	---	----	---

Complete if Known

<i>Application Number</i>	09/891,523
<i>Filing Date</i>	June 27, 2001
<i>First Named Inventor</i>	Ryan N. RAKVIC et al.
<i>Art Unit</i>	2188
<i>Examiner Name</i>	Midys INOA
<i>Attorney Docket Number</i>	02207/1123601

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. DC01 487788 v1.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PTO/SB/08b(08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2

of

2

Complete if Known

Application Number	09/891,523
Filing Date	June 27, 2001
First Named Inventor	Ryan N. RAKVIC et al.
Art Unit	2188
Examiner Name	Midys INOA
Attorney Docket Number	02207/1123601

RECEIVED

APR 02 2004

Technology Center 2100

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	9	BLACK et al, "The Block-Based Trace Cache", Proceedings of The 26th Int'l. Symposium on Computer Architecture, pp. 196-207, May 2-4, 1999, Atlanta, Georgia	
	10	CONTE et al, "Optimization of Instruction Fetch Mechanisms for High Issue Rates", Proceedings of the 22nd Annual Int'l Symposium on Computer Architecture, pp. 333-344, June 22-24, 1995, Santa Margherita Ligure, Italy	
	11	DUTTA et al, "Control Flow Prediction with Tree-Like Subgraphs for Superscalar Processors", Proceedings of The 28th Int'l. Symposium on Microarchitecture, pp. 258-263, Nov. 29 - Dec. 1, 1995, Ann Arbor, Michigan	
	12	FRIENDLY et al, "Alternative Fetch and Issue Policies for the Trace Cache Fetch Mechanism", Proceedings of The 30 th Annual IEEE/ACM Int'l Symposium on Microarchitecture, pp. 24-33, Dec. 1-3, 1997, Research Triangle Park, North Carolina	
	13	INTRATER et al, "Performance Evaluation of a Decoded Instruction Cache for Variable Instruction-Length Computers", Proceedings of the 19 th Annual Int'l Symposium on Computer Architecture, pp. 106-113, May 19-21, 1992, Gold Coast, Australia	
	14	JACOBSON et al, "Path-Based Next Trace Prediction", Proceedings of the 30 th Annual Int'l Symposium on Microarchitecture, pp. 14-23, December 1-3, 1997, Research Triangle Park, North Carolina	
	15	MCFARLING, SCOTT, "Combining Branch Predictors", June, 1993, WRL Technical Note TN-36, Digital Western Research Laboratory, pp. i-25, Palo Alto, California	
	16	MICHAUD et al, "Exploring Instruction-Fetch Bandwidth Requirement in Wide-Issue Superscalar Processors", Proceedings of the 1999 Int'l Conference on Parallel Architectures and Compilation Techniques, pp. 2-10, October 12-16, 1999, Newport Beach, California	
	17	PATEL et al, "Improving Trace Cache Effectiveness with Branch Promotion and Trace Packing", Proceedings of The 25 th Annual Int'l Symposium on Computer Architecture, pp. 262-271, June 27 - July 1, 1998, Barcelona, Spain	
	18	REINMAN et al, "A Scalable Front-End Architecture for Fast Instruction Delivery", Proceedings of the 26 th Int'l Symposium on Computer Architecture, pp. 234-245, May 2-4, 1999, Atlanta, Georgia	
	19	ROTENBERG et al, "Trace Cache: A Low Latency Approach to High Bandwidth Instruction Fetching", Proceedings of the 29 th Annual IEEE/ACM Int'l Symposium on Microarchitecture, MICRO-29, pp. 24-34, December 2-4, 1996, Paris, France	
	20	SEZNEC et al, "Multiple-Block Ahead Branch Predictors", Proceedings of the 7 th Int'l Conference on Architectural Support for Programming Languages and Operating Systems, pp. 116-127, October 1-4, 1996, Cambridge, USA	
	21	YEH et al, "Increasing the Instruction Fetch Rate via Multiple Branch Prediction and A Branch Address Cache", Proceedings of the 7 th Int'l Conference on Supercomputing, pp. 67-76, July 1993, Ann Arbor, Michigan	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.